Ultrasonic Flowmeter
Flowmax® 42i

Flowmax® 42i is a non-contact ultrasonic flowmeter for conductive and non-conductive liquids. Its low dead-space channel geometry and absence of moving parts make it wear-free and particularly hygienic. All wetted components are made of PE-HD, allowing safe measurement of DI water, as well as alkaline, toxic and aggressive media. Other materials upon request.

The device offers high measurement accuracy, excellent repeatability and an integrated empty-pipe detection feature. A PID control function is optionally available. The response time is in the millisecond range.
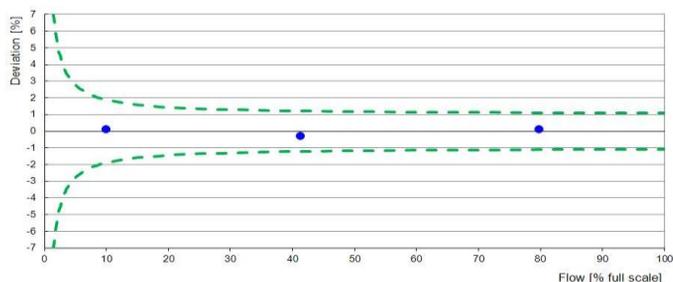
Flowmax® comes standard with a preset batch counter; an optional start signal is available. A control output for pumps or valves is integrated, making the Flowmax® 42i ideal for use with piston diaphragm and peristaltic pumps.

Housing					
Material	PE-HD				
Nominal diameter	3mm	5mm	7mm	10mm	15mm
Measuring range [l/min]	0.012 … 1.5	0.024 … 3	0.09 … 6	0.3 … 24	0.9 … 60
Process connection:					
Inch internal thread	G1/2			G3/4	G1
Clamp according to DIN 11864-4 BKS Form A	DN10			DN10	DN15
Tri Clamp DIN 32676	D25 NW8			D25 NW8	D34 DN15
External thread according to ISO 228-1	G5/8			G3/4	G1
Dimensions of device with internal thread L/W/H [mm]	168 / 147 / 50			171 / 147 / 50	176 / 147 / 55
[inch]	6.6 / 5.8 / 2			6.7 / 5.8 / 2	6.9 / 5.8 / 2.2
Weight [kg]	0.67			0.72	0.89
Protection class	IP65				
Medium temperature [°C]	0 … 50				
Nominal pressure [PN]	10				

Electronics	
Power supply	24VDC, approx.. 3.6W
Electrical connection	5 or 8-pin plug
Display	Simultaneous illuminated display of flow rate, total volume, and bar graph
Input[1]	1 digital input, usable for dosing start
Outputs[1]	2 digital outputs, configurable as pulse output or empty pipe alarm, 1 analog output, configurable as current output 0/4-20mA, RS485-data interface
Max. error of measurement	± 2% o.r. ± 0.15% f.s. (o.r. = of reading; f.s. = full scale) option with calibration: ± 1% o.r. ± 0.15% f.s. Reference conditions (VDI/VDE 2642)
Repeatability	≤ 0,5%

[1] The variety of input/output options depends on the connector selection.

Additionally selectable options
Calibration (3 or 8 points) including certificate
Output of the speed of sound
Communication via Modbus
Explosion protection according to ATEX/IECEx (see Flowmax® 42i EX)

Example:
Measuring points of a calibrated Flowmax in error graph according definitions.

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Technical subjects to be changed!